

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in this Application:

Listing of Claims:

{0069}-(Currently amended) 1. A light guide plate characterized in having a groove in a snaking pattern formed on a transparent plate having light-transmitting characteristics.

{0070}-(Currently amended) 2. A light guide plate claimed in claim 1 characterized in having said groove machined to have a V-shaped cross section by means of a cutting tool.

{0071}-(Currently amended) 3. A method of manufacturing a light guide plate characterized in forming a groove in a snaking pattern on a transparent plate having light-transmitting characteristics using a cutting tool.

{0072}-(Currently amended) 4. A method of manufacturing a light guide plate claimed in claim 3 characterized in having said groove machined to have a V-shaped cross section.

{0073}-(Currently amended) 5. A method of manufacturing a light guide plate claimed in either claim 3 or 4 characterized in finishing said V-shaped groove's side surfaces smooth and sharp using a V-shaped cutter as a cutting tool for said groove in order to be able to reflect light efficiently by said groove.

{0074}-(Currently amended) 6. A light source apparatus characterized in comprising: a light guide plate having a groove with a V-shaped cross section in a snaking pattern formed on a transparent plate having light-transmitting characteristics; and a light source disposed on said light guide plate's edge, wherein said groove with the V-shaped cross section reflects light emitted by said light source into said light guide plate's inside so that said light guide plate radiates the light outside.

{0075}-(Currently amended) 7. A light guide plate characterized in having a groove with a V-shape cross section in a snaking pattern on a transparent plate having light-transmitting characteristics.

{0076}-(Currently amended) 8. A method of manufacturing a light guide plate characterized in forming a groove with a V-shaped cross section in a snaking pattern on a transparent plate having light-transmitting characteristics using a cutting tool.

{0077}-(Currently amended) 9. A method of manufacturing a light guide plate claimed in either claim 8 characterized in finishing said V-shaped groove's side surfaces smooth and

sharp using a V-shaped cutter as a cutting tool for said groove in order to be able to reflect light efficiently by said groove.

{0078}-(Currently amended) 10. A light guide plate characterized in comprising: a transparent plate having light-transmitting characteristics; a first snaking pattern of groove formed on said transparent plate; and a second pattern of groove that is formed to intersect or contact with said first pattern of groove on said surface; wherein the light that passes through said transparent plate is reflected by said first pattern of groove and said second pattern of groove.

{0079}-(Currently amended) 11. A light guide plate claimed in claim 10 characterized in said second pattern of groove is formed in a snaking pattern.

{0080}-(Currently amended) 12. A light guide plate claimed in claim 10 characterized in said second pattern of groove is formed in a linear pattern.

{0081}-(Currently amended) 13. A light guide plate claimed in claim 11 characterized in that said first pattern of groove and said second pattern of groove intersect or contact with each other as a result of having said first pattern of groove's and said second pattern of groove's translating directions are set substantially parallel to each other and their snaking phases are set different from each other.

{0082}-(Currently amended) 14. A light guide plate claimed in claim 13 characterized in that the difference of the snaking phases of said first pattern of groove and said second pattern of groove is set to approximately 180 degrees.

{0083}-(Currently amended) 15. A light guide plate claimed either one of claims 10 through 12 in claim 10 characterized in that said first pattern of groove's translating direction is set unparallel to said second pattern of groove's translation direction so that said first and second patterns of grooves intersect or contact with each other.

{0084}-(Currently amended) 16. A light guide plate claimed in either one of claims 10 through 15 claim 10 wherein a plurality of said first pattern of grooves and a plurality of said second pattern of grooves are formed.

{0085}-(Currently amended) 17. A light guide plate claimed in either one of claims 10 through 16 claim 10 characterized in having said first pattern of groove(s) snakes partly in a curvilinear form.

{0086} (Currently amended) 18. A light guide plate claimed in either one of claims 10 through 16 claim 10 characterized in having said first pattern of groove(s) snaking substantially in a sinusoidal form.

{0087} (Currently amended) 19. A light guide plate claimed in either one of claims 10 through 16 claim 10 characterized in having said first pattern of groove(s) snaking in a form of straight line segments combined noncontiguously.

{0088} (Currently amended) 20. A light guide plate claimed in either one of claims 10 through 16 claim 10 characterized in having hexagonal areas surrounded by said first and second patterns of grooves that are intersecting or contacting with each other.

{0089} (Currently amended) 21. A light source apparatus characterized in comprising: a light guide plate claimed either one of claims 10 through 20 in claim 10; and a light source disposed on said light guide plate's edge,
wherein

said groove with the V-shaped cross section reflects light emitted by said light source into said light guide plate's inside so that said light guide plate radiates the light outside.

{0090} (Currently amended) 22. A liquid crystal display device characterized in comprising: a light source apparatus claimed in claim 21;
and

a liquid crystal panel disposed in parallel with said light guide plate.

{0091} (Currently amended) 23. An apparatus for manufacturing a guide plate by forming a plurality of rows of grooves on a transparent plate using a plurality of cutting tool bits affixed on a blade, comprising:

a plurality of cutting tool bits affixed on a blade;

a rocking motion unit for moving said blade back and forth; and a translating motion unit for moving said blade relative to said transparent plate in the translation direction of the grooves;
wherein

said blade is provided with

a first tool bit set consisting of a plurality of said cutting tool bits for forming a first snaking pattern of grooves; and a second tool bit set disposed a specified space apart from said first tool bit set in said translation direction of the grooves in order to form a second pattern of grooves having a snaking phase difference relative to said first pattern of grooves.